

# Notice of Allowability

Application No.

10/711,025

Examiner

James R. Talman

Applicant(s)

GUPTA ET AL.

Art Unit

3709

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to patent application filed on 8/18/2004.
2. ☒ The allowed claim(s) is/are 1-12.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 8/23/2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Claims 1-12 allowed.

The following is an examiner's statement of reasons for allowance:

The following documents are considered relevant:

Knoploch et al (US patent application publication No. 2002/0156359

O'Donnell et al (US patent application publication No. 2005/0033143).

As per claims 1, 5, and 9, Knoploch et al discloses scanning an internal anatomy of a chest region (generating views of a heart along anatomically useful planes, see abstract), generating a first plurality of cross-sectional digital images of the heart (Axial, Sagittal, Oblique, see Figure 4), identifying a left ventricular myocardium and a first apex position and a first base position (find an image with a mitral valve and apex of the heart, paragraph 30), generating an axis extending through the first apex position and the first base position (rotating a yellow line so that it joins these features, paragraph 30), and scanning the anatomy of the chest region of the person along the first axis perpendicular to a first image (produce at least one 4-chamber long axis view, paragraph 30; see also Figure 7, see also paragraph 32), generating additional digital image data (Figure 7), identifying and generating a second axis (Figure 9), and scanning the internal anatomy along planes perpendicular to the second digital image to generate a third digital image (Figure 10). Knoploch et al discloses generating a digital image of four chambers of the heart but does not explicitly disclose doing so based on

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the third image (Figure 5). This is an obvious variation, once the short axis of the heart has been determined in the third image. Knoploch et al does not disclose automatically determining a ventricular blood volume of automatically selecting a digital image from the first plurality of digital images indicating a largest ventricular blood volume.

O'Donnell discloses automatically determining a ventricular blood volume (320, Figure 3) but does so based on a Sagittal image to start its algorithm for determining the axes of the heart. O'Donnell et al does not disclose automatically selecting a second digital image from the first plurality of cross-sectional digital images indicating a largest ventricular blood volume. Therefore, the prior art of record fails to teach, or render obvious the feature as stated above in combination with all other limitations as recited in independent claims 1, 5, and 9.

As per claims 2-4, 6-8, and 10-12, they are allowable because they depend from allowable independent claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James R. Talman whose telephone number is 571-270-3029. The examiner can normally be reached on 7:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynda Jasmin can be reached on 571-270-3033. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James R Talman  
Examiner  
Art Unit 3709

jrt



**BENNY TIEU**  
**PRIMARY EXAMINER**